

REMARKS

Amendments to claims 1, 9, 29, 35, 41, 52, and 55 are for the purpose of clarifying what Applicant regards as the claimed invention. No new matter has been added.

I. Claim rejections under 35 U.S.C. § 103

Claims 1, 2, 6-9, 11, 13-16, and 46 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,841,833 (Mazess) in view of U.S. Patent No. 6,445,765 (Frank). Claims 4, 5, 9, 18-22, 26-28, 41, 45, and 47-55 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Publication No. 2002/0191751 (Bogatu) in view of U.S. Patent No. 5,138,167 (Barnes) and Mazess. Claims 29, 31, 32, 34, 35, 37, 38, and 40 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bogatu in view of EP 1016881 A2 (Maekawa).

Without acquiescence to the basis of the rejections, and in the interest in advancing prosecution, independent claims 9, 29, 35, 41, and 52 have been amended. In particular, claim 9 has been amended to recite that the conversion panel having the plurality of first conversion elements and the plurality of second conversion elements has a curvilinear configuration. Claim 29 has been amended to recite that the photoconductor layer that is aligned with the first and second filters has a curvilinear configuration. Claim 35 has been amended to recite that the conversion layer that is aligned with the first and the second filters has a curvilinear configuration. Claim 41 has been amended to recite that the plurality of first imaging elements and the plurality of second imaging elements collectively form a curvilinear surface. Claim 52 has been amended to recite that the plurality of first imaging elements having the first photoconductor and the plurality of second imaging elements having the second photoconductor collectively form a curvilinear surface. New claim 56 recites that the plurality of first imaging elements that includes the first scintillating material and the plurality of second imaging elements that includes the second scintillating material collectively form a curvilinear surface. New claim 58 recites that the photoconductor layer having the plurality of first photoconductor elements and the plurality of second photoconductor elements has a curvilinear configuration.

Applicant respectfully submits that none of the above cited references, either alone or in combination, discloses or suggests the above claimed features, and certainly not in combination with the rest of the subject matter described in the respective independent claims. Thus, Applicant respectfully submits that with entry of the current claim amendments, claims 9, 29, 35, 41, 52, 56, and 58, and any claims depending therefrom, should be allowable.

Also, Applicant respectfully submits that claims 1 and 18 should be allowable in view of the following remarks.

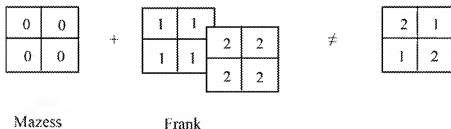
Claim 1

Claim 1 recites that the first and second scintillating materials for respective first and second imaging elements of *a detector assembly* have *different compositions* (Emphasis Added). Mazess and Frank do not disclose or suggest such limitations. Rather, Mazess discloses high energy detector 37(a) and low energy detector 37(b) that are made from respective separate materials 308, 312 having the *same* composition. Also, Applicant respectfully disagrees with the Office Action's characterization that column 27, lines 23-45 of Mazess allegedly implies different materials (i.e., that are used to form different imaging elements in a same detector/panel). There is nothing in this cited passage of Mazess that discloses or suggests that different imaging elements in a same detector assembly, or in a same panel, have different materials with different compositions. Instead, in Mazess, the difference in energy detectors 37(a), 37(b) is achieved by varying the thickness of the material that is used to form the detectors (as indicated by the same type of shading in figures 22, 23), and not by using different materials with different compositions. Thus, while Mazess discloses that in different embodiments, different materials may be used, considering the Mazess reference entirely (especially in view of figures 22 and 23 indicating that the same material with the same compositions are used to construct the same detector), it is clear that the different materials are not to be combined in a same detector, but they are *alternative* materials that can be used to construct a detector in different embodiments. Note that in order to sustain a prima facie case of the § 103 rejection, the entirety of the reference must be considered.

Frank also does not disclose or suggest the above limitations, and therefore fails to make up the deficiencies present in Mazess. Since both Mazess and Frank fail to disclose or suggest the above limitations, they cannot be combined to form the subject matter of the above claims.

According to page 2 of the Office Action, the Examiner has read Applicant's argument regarding Frank as failing "to show two different materials." Applicant believes that this is a mischaracterization of Applicant's argument. The argument against Frank made in the last response was that it actually fails to show different imaging elements of a same detector assembly/panel be made from different materials with different compositions. In particular, Frank discloses that *two* separate detector assemblies (i.e., not "a" same detector assembly, as recited in claim 1) can have different respective chemical compositions (column 1, lines 10-24), but does not disclose or suggest that different imaging elements in a detector assembly (e.g., either one of the two detector assemblies) be made from different materials.

Since Mazess discloses that different imaging elements in a same detector assembly are made from a same material (see diagram below with "0" representing the material in the device of Mazess), and Frank discloses that two separate detector assemblies can have different respective materials (see diagram below with "1" representing first material, and "2" representing second material in the device of Frank), their combination clearly does not, and cannot, result in a detector assembly/panel having different imaging elements formed from different compositions (see diagram below). Thus, the combined teachings of Mazess and Frank could not have suggested to those of ordinary skill in the art of the subject matter of claim 1.



Applicant notes that the above arguments presented with respect to the above diagrams have not been addressed by the Examiner. Thus, to the extent that the Examiner is inclined to maintain the rejections, Applicant respectfully requests that the above arguments be considered and addressed.

For at least the foregoing reasons, claim 1 its dependent claims are believed allowable over the cited references.

Claim 57

New claim 57 recites that one of the first imaging elements including the first scintillating material and one of the second imaging elements including the second scintillating material are configured to receive radiation simultaneously. Mazess and Frank also do not disclose or suggest the above limitations. Rather, as discussed, Frank specifically teaches two detectors 5, 6 that are arranged in a front-to-back configuration (figure 1), whereby radiation is received serially one after the other. Thus, Frank in fact teaches away from two imaging elements with different materials that are configured to receive radiation simultaneously. Note that a reference cannot be used in a combination to sustain a claim rejection under § 103 if the reference teaches away from a claimed feature. For these additional reasons, new claim 57 should be allowable.

Claim 18

Claim 18 recites that the plurality of *first photoconductor elements* and the plurality of *second photoconductor elements form a surface* (Emphasis Added). Applicant agrees with the Examiner that Bogatu does not disclose an imaging layer having different imaging elements.

According to the Office Action, Barnes allegedly discloses different semiconductor materials, and therefore, it would have been allegedly obvious to modify Bogatu to include different semiconductors as that taught by Barnes to improve detection accuracy and sensitivity. However, Applicant respectfully notes that Barnes specifically teaches providing two layers of detector elements (i.e., to form a “front and rear” configuration - see column 11, line 52, and figure 2) so that low energy is absorbed by the first layer, and high energy is transmitted through the first layer and absorbed by the second layer (column 4, line 67 to column 5, line 4). Thus, regarding the test for obviousness, the combined teachings of Bogatu and Barnes clearly do not disclose or suggest selecting a material from the first layer 26 of Barnes, selecting a material from another layer 28 of Barnes, and placing them on the same layer 22’ of Bogatu.

In addition, Applicant notes that the filters 32, 34 in Bogatu are *not* photoconductor elements that generate charges in response to radiation. Thus, there is no reason to replace the filters 32, 34 of Bogatu with different photoconductor elements having different imaging characteristics. Furthermore, there is certainly no reason for one skilled in the art to make the purported combination in view of Barnes. This is because Barnes teaches two layers of imaging elements 22, 24. Thus, in view of Barnes, one may include an additional layer 22 of imaging

elements in the device Bogatu (note that in Bogatu, the layer 22 with imaging elements 76, not the filter layer 74, has imaging capability), and would not replace the different filter elements 32, 34 in the filter layer 74 with different photoconductor elements, as purported in the Office Action.

Also, according to the Office Action, Bogatu allegedly discloses enhancing the contrast and spatial resolution of an image, and one skilled in the art allegedly knows that it is well known that a dual energy side-by-side detector reduces the possibility of motion artifacts and of edge artifacts, which will also enhance the contrast and spatial resolution of the image. Applicant respectfully disagrees. Applicant submits that Bogatu's disclosure of enhancing contrast and spatial resolution of an image cannot be the motivation to use "a dual energy side-by-side detector." This is because placing different energy detectors in a side-by-side configuration would actually result in only parts of the detector being used for imaging for a given imaging energy (i.e., not all of the imaging elements can be used because they react to different imaging energies). Thus, Bogatu's disclosure of enhancing contrast and spatial resolution of an image actually discourages one skilled in the art in placing imaging elements with different imaging characteristics in a side-by-side configuration. Applicant notes that the above arguments have not been addressed by the Examiner. Thus, to the extent that the Examiner is inclined to maintain the rejection, Applicant respectfully requests that the above arguments be considered and addressed.

For at least the foregoing reasons, Applicant respectfully requests that the § 103 rejection for claim 18 be withdrawn.

Claim 59

New claim 59 recites that one of the first photoconductor elements and one of the second photoconductor elements are configured to receive radiation simultaneously. Bogatu and Barnes also do not disclose or suggest the above limitations. Rather, as discussed, Barnes specifically teaches two detectors that are arranged in a front-to-back configuration (figure 2), whereby radiation is received serially one after the other. Thus, Barnes in fact teaches away from two imaging elements with different materials that are configured to receive radiation simultaneously. Note that a reference cannot be used in a combination to sustain a claim rejection under § 103 if the reference teaches away from a claimed feature. For these additional reasons, new claim 59 should be allowable.

CONCLUSION

Based on the foregoing, all claims are believed in condition for allowance. If the Examiner has any questions or comments regarding this amendment, please contact the undersigned at the number listed below.

Applicant(s) hereby explicitly retracts and rescinds any and all of the arguments and disclaimers presented to distinguish the prior art of record during the prosecution of all parent and related application(s)/patent(s), and respectfully requests that the Examiner re-visit the prior art that such arguments and disclaimers were made to avoid.

The Commissioner is authorized to charge any fees due in connection with the filing of this document to Vista IP Law Group's Deposit Account No. 50-1105, referencing billing number **VM 03-036-US**. The Commissioner is authorized to credit any overpayment or to charge any underpayment to Vista IP Law Group's Deposit Account No. 50-1105, referencing billing number **VM 03-036-US**.

Respectfully submitted,

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